

-continued

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His His His His His His
 1 5

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<212> TYPE: PRT

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<223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 peptide

<400> SEQUENCE: 57

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We claim:

1. A method for treating headache in an individual, comprising:

administering to the individual an effective amount of a humanized monoclonal anti-Calcitonin Gene-Related Peptide (CGRP) antagonist antibody, comprising:

two human IgG heavy chains, each heavy chain comprising three complementarity determining regions (CDRs) and four framework regions, wherein portions of the two heavy chains together form an Fc region; and two light chains, each light chain comprising three CDRs and four framework regions;

wherein the CDRs impart to the antibody specific binding to a CGRP consisting of amino acid residues 1 to 37 of SEQ ID NO:15 or SEQ ID NO:43.

2. The method of claim 1, wherein the antibody is formulated with a pharmaceutically acceptable carrier, excipient, or stabilizer.

3. The method of claim 1, wherein the antibody is administered systemically, intravenously, subcutaneously, intramuscularly, or transdermally.

4. The method of claim 1, wherein the antibody is administered intravenously or subcutaneously.

5. The method of claim 1, wherein the headache is a migraine with or without aura, hemiplegic migraine, cluster headache, migrainous neuralgia, chronic headache, or tension headache.

6. The method of claim 1, wherein the headache is a migraine.

7. The method of claim 1, wherein the antibody is administered at a dose of at least 3 µg/kg.

8. The method of claim 1, wherein constant regions of the IgG heavy chains are IgG1 constant regions.

9. The method of claim 8, wherein the CDRs impart to the antibody specific binding to a fragment of the CGRP comprising amino acid residues 8 to 37 of SEQ ID NO:15.

10. The method of claim 8, wherein the CDRs of the humanized monoclonal antibody are derived from mouse, rat, or rabbit CDRs.

11. The method of claim 1, wherein constant regions of the IgG heavy chains are IgG2 constant regions.

12. The method of claim 11, wherein the CDRs impart to the antibody specific binding to a fragment of the CGRP comprising amino acid residues 8 to 37 of SEQ ID NO:15.

13. The method of claim 11, wherein the CDRs impart to the antibody specific binding to a fragment of the CGRP comprising amino acid residues 33 to 37 of SEQ ID NO:15.

14. The method of claim 11, wherein the CDRs of the humanized monoclonal antibody are derived from mouse, rat, or rabbit CDRs.

15. The method of claim 1, wherein constant regions of the IgG heavy chains are IgG4 constant regions.

16. The method of claim 15, wherein the CDRs impart to the antibody specific binding to a fragment of the CGRP comprising amino acid residues 8 to 37 of SEQ ID NO:15.

17. The method of claim 15, wherein the CDRs of the humanized monoclonal antibody are derived from mouse, rat, or rabbit CDRs.

18. The method of claim 15, wherein a constant region of the antibody comprises a mutation in an oligosaccharide attachment amino acid residue that is part of an N-glycosylation recognition sequence in the constant region.

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